

What Is Claimed Is:

1. A device for measuring a force in a predefined direction, comprising:
a sensor element, the sensor element including a substrate having a main substrate plane, wherein the predefined direction of force measurement is parallel to the main substrate plane.
2. The device according to claim 1, wherein the substrate includes a cutout in a direction perpendicular to the main substrate plane.
3. A device for measuring a force, comprising:
a sensor element, the sensor element having a substrate, the substrate having a main substrate plane, wherein the sensor element has a stress zone and a weakening zone, the stress zone being provided over an entire thickness of the substrate perpendicular to the main substrate plane, and the weakening zone being provided over the entire thickness of the substrate perpendicular to the main substrate plane.
4. The device according to claim 3, wherein the stress zone and the weakening zone are adjacent in the main substrate plane.
5. The device according to claim 3, wherein the weakening zone is provided as a cutout in the substrate in a direction perpendicular to the main substrate plane.
6. The device according to claim 5, wherein the cutout is provided through the entire thickness of the substrate perpendicular to the main substrate plane.
7. The device according to claim 5, wherein the cutout is configured as a hole through the substrate in a direction perpendicular to the main substrate plane.
8. The device according to claim 5, wherein the cutout is configured as a rectangle.
9. The device according to claim 3, wherein the stress zone is provided at an edge of the substrate.

10. The device according to claim 3, further comprising:
a force-introduction element arranged at the stress zone, the force-introduction element being integrally joined with the substrate.
11. The device according to claim 10, wherein the force-introduction element is provided as one of a tapering, a wedge, a triangle, and a flat-spring-type structure which includes the stress zone, the cutout and the force-introduction element.
12. The device according to claim 10, wherein the force-introduction element is provided in a middle of the stress zone.
13. The device according to claim 3, wherein the substrate is provided from a semiconductor material.
14. The device according to claim 3, wherein the substrate is provided at least one of in a partial area as silicon on insulator material and as silicon carbide on insulator material.
15. The device according to claim 3, wherein at least one of the sensor element is provided as a micromechanical sensor element and integrated evaluation electronics are provided on the substrate.
16. The device according to claim 1, further comprising:
a measuring area, wherein the pressure is measured via a measurement of a pressure force onto the measuring area.
17. The device according to claim 3, wherein the device is configured as a pressure sensor.